COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)

KATHLEEN HARTMAN, MS, DVM, PHD
AQUACULTURE PROGRAM LEADER

NIIAA
AQUATIC LIVESTOCK COMMITTEE
APRIL 5\textsuperscript{TH}, 2016
KANSAS CITY, MO
• National Aquaculture Association (NAA) and APHIS VS

• Implementation plan of the NAAHP for commercial aquaculture

<table>
<thead>
<tr>
<th>NAA</th>
<th>APHIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Parsons, Chair</td>
<td>Kathleen Hartman</td>
</tr>
<tr>
<td>Mike Freeze</td>
<td>Lee Ann Thomas</td>
</tr>
<tr>
<td>Randy MacMillan</td>
<td>Christa Speekmann</td>
</tr>
<tr>
<td>Ken Cline</td>
<td>Lynn Creekmore</td>
</tr>
<tr>
<td>Diane Cooper</td>
<td>Lori Gustafson</td>
</tr>
<tr>
<td>Sebastian Belle</td>
<td>Deborah Millis</td>
</tr>
<tr>
<td>Craig Watson</td>
<td>Carol LoSapio</td>
</tr>
<tr>
<td>Betsy Hart</td>
<td></td>
</tr>
</tbody>
</table>
What is CAHPS?

- Farm health management plan
- Voluntary, nonregulatory
- Science-based
- Strengthened through State, Tribal, and Federal collaboration and partnership
Applicability of CAHPS

• Assurance of health of farm raised aquatic animals
  o Animals are lower risk for specific diseases because of biosecurity and surveillance

• Facilitate animal trade and movement
  o Leverage international trade
  o Reduce hurdles for interstate movement

• Marketing and branding
  o Increase public trust
  o Demonstrates awareness of standards for consumers

• Complement to other programs
  o Food system biosecurity
  o Food safety
  o Certification programs
  o Animal welfare
  o Yield verification studies
Benefits of CAHPS Approach

- Comprehensive health management of livestock
  - National health standards for aquaculture

- Auditable system
  - Oversight
  - Documentation

- Flexible and responsive
  - Scalable surveillance strategies
  - Emerging pathogens
1. Aquatic animal health team  
   - The knowledge & skills

2. Risk evaluation  
   - The science & method

3. Surveillance  
   - The strategy & approach

4. Investigation and reporting  
   - The process & protocols

5. Response & Recovery  
   - What we do when things happen
**CAHPS (E, C, and Z)**

- **Establishment (E)**
  - Single site with lower risk because of surveillance and biosecurity

- **Compartment (C)**
  - Single site with higher standard of biosecurity and even lower risk

- **Zone (Z)**
  - Region around site with surveillance partners
  - Claim disease “free” status
Aquatic Animal Health Team

- Comprised of:
  - Veterinarians, AFS certified professionals, laboratorians, extension agents & other subject matter experts

- Actively engages with site

- Assists with Site-Specific Health Plan
  - Development, implementation and evaluation
Risk Evaluation

- **Risk Identification**
  - Pathogens of concern for species being cultured and for species in proximity
  - Pathways of introduction or spread

- **Risk Characterization**
  - Degree of risk
  - Scope of risk
  - Impact of risk – exotic vs endemic pathogens

- Comprehensive and integrated surveillance plan for aquaculture (CIS-Aqua)
Risk Management

- **Risk Mitigation**
  - **Strategies**
    - Early disease detection systems (EDDS)
      - Training and management
      - Setting site specific thresholds
  - **Biosecurity**
    - Management procedures to mitigate identified risks
      - “Not all footbaths are created equally”
Surveillance

• Purpose and boundaries of surveillance
  ○ Freedom of disease, known disease status
  ○ Site, zone

• Strategies – based on goals and diagnostics
  ○ Observational
  ○ Risk based
    • Enhanced routine moribund sampling
      ○ Repeated collections; seasonal
      ○ Diagnostics – at least 50% sensitivity
Investigation & Reporting

- **Disease investigation**
  - Triggered with site specific thresholds are exceeded
  - Scope depends on pathogen and impact
  - Diagnostics

- **Reporting**
  - OIE, national and state lists
    - NLRAD
  - Appropriate officials
Response

- Contingency Planning
- Pathogen and impact of pathogen
  - Treat? Vaccinate? Depopulate?
- Debrief for lessons learned
  - What went wrong?
  - How to fix
- Recovery and continuity of business
### Where is CAHPS Now?

<table>
<thead>
<tr>
<th><strong>Documentation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revised version pending</td>
</tr>
<tr>
<td>• Communication plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Discussion Groups</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Over-arching themes</td>
</tr>
<tr>
<td>- Principles are good</td>
</tr>
<tr>
<td>- Success will be dependent on buy-in</td>
</tr>
<tr>
<td>- Diagnostic consistency</td>
</tr>
<tr>
<td>- Benefits and costs</td>
</tr>
<tr>
<td>- Information collection and security</td>
</tr>
<tr>
<td>- Voluntary vs regulatory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Presentations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Association meetings</td>
</tr>
<tr>
<td>- USAHA, NCAA, AFWA, NIAA, USTFA, VAA, WAS</td>
</tr>
<tr>
<td>• Fish Health meetings</td>
</tr>
<tr>
<td>- PNWFHPC, NEFHC, GLFHC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Publications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Aquaculture Magazine (Apr-May 2015)</td>
</tr>
<tr>
<td>• Sustainable Aquaculture Digital (Feb 2016)</td>
</tr>
</tbody>
</table>
Cost-Benefit Analysis of CAHPS

- Cooperative agreement with APHIS and UAPB
  - Bait and sport fish sector

- Benefit of CAHPS – driven by foregone/lost sales

- Net benefit
  - Regulatory costs reduced from $150K to $56K (best) and $66K (worst)
  - Savings per acre $1,900 (best) and $600 (worst)

- Direct costs 1% and indirect costs 99%

- $12+ million in regulatory costs reduced to $5 million
Other Projects

- Trout/Salmon Sector Survey
  - Western Regional Aquaculture Center covering 5 states
  - APHIS cooperative agreement with Virginia Tech and Engle-Stone Aquatic$, LLC covering 9 additional states

- Maine Shellfish
  - Lot versus zone based testing costs
  - Estimate cost-effectiveness on demonstration of disease freedom and prevalence estimation, example of non-OIE standard for target level
  - Compare pre and post trade with Canada
What’s Next for CAHPS?

- **CAHPS Projects**
  - Pilot with NCAA and Fresh Keepers, Inc.
    - AAHT established for cooperative
    - Risk evaluation pending
  - Cooperation with Eastern Shellfish Growers Association
    - Surveillance for zoning
  - Outcomes
    - Identify challenges for implementation
    - Create templates and checklists
    - Training events
    - Economic assessment
  - Site specific health plan
    - Identify user-friendly format
  - Data management solutions
Economic Impact Studies for CAHPS

- Checklist/template of data to collect during pilot projects
- Calculate economic estimates related to costs and benefits of CAHPS
- Yield verification studies
SMARTT Goal: Increase participation in CAHPS by FY18.

<table>
<thead>
<tr>
<th>Critical Success Factor (CSF)</th>
<th>Key Performance Indicator (KPI)</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot projects</td>
<td>Number of pilot projects</td>
<td>5</td>
</tr>
<tr>
<td>Producer participation</td>
<td>Number of written site specific health plans</td>
<td>20</td>
</tr>
<tr>
<td>Recognition</td>
<td>Number of states accepting CAHPS participation</td>
<td>5</td>
</tr>
<tr>
<td>Availability of veterinary expertise</td>
<td>% of private veterinarians leading CAHPS AAHTs</td>
<td>15%</td>
</tr>
</tbody>
</table>
Principles of assuring farm raised aquatic animal health and facilitating animal movement

- We CAN’t Because....

- We CAN! if...
Thank You