Biosecurity – Logical, Implementable Biosecurity Plans for Horseshows

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Animal Health Branch

Protecting Equine Health
The Perfect Storm at a Show

- Entry and Movement of the Disease Agent
- Exposure of Stressed Susceptible Horse Populations
- Environmental Spread of Disease
- Lack of Biosecurity

Protecting Equine Health
Biosecurity

• Practices that
  – Reduce the chance infectious diseases will be carried on to a event premises
  – Reduce the spread of infectious diseases on event grounds.
Biosecurity: A Common Sense Approach
How do I start on a biosecurity Plan?
Step 1: Identify Risks for Disease Entry
Will the school allow a child with a fever into the classroom?
Do you allow a sick horse onto your show grounds?

What steps do you take to ensure healthy horses enter the show grounds?
Step 2: Identify Potential Ways for Disease Pathogen Spread at the Event “Follow the Horse”

- **Direct contact**
  - Horses
  - Livestock
  - Dogs
  - Humans

- **Indirect Contact**
  - Hands
  - Clothing
  - Equipment
  - Communal Areas
How often do you share a drink with multiple people?
Do you share a tissue after you have used it?
What’s under the mats?

Protecting Equine Health
Commingling of Horses: How can we reduce the risk?

Protecting Equine Health
How can we reduce the risk of fixed stabling?
Human to Horse Contact

Protecting Equine Health
Dogs at Equine Events

Protecting Equine Health
Facility Risk Assessment Tools

Event Facility Biosecurity Risk Assessment

Disease risk cannot be completely eliminated from an equine event. Well before an event, event organizers, in consultation with a veterinarian hired by the event, should conduct a biosecurity risk assessment of the event facilities and horse handling practices. An evaluation of current management practices will help identify potential biosecurity risks. It is important to evaluate the level of risk, and then determine what measures to take in the Event Biosecurity and Infectious Disease Control Plan to address the risk areas of concern.

<table>
<thead>
<tr>
<th>Mininal Biosecurity Risk</th>
<th>Medium Biosecurity Risk</th>
<th>High Biosecurity Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stalls</strong></td>
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</tr>
<tr>
<td>Number of Stalls</td>
<td>Twice the number of stalls needed</td>
<td>Some Extra Stalls</td>
</tr>
<tr>
<td>Material</td>
<td>Metal</td>
<td>Treated Wood (non-porous)</td>
</tr>
<tr>
<td>Assignment of Stalls</td>
<td>Grouped by Owner/Trainers with separation between Owner/Trainers</td>
<td>Grouped By Owner/Trainer - No Separation Between Owners/Trainers</td>
</tr>
<tr>
<td><strong>Isolation Area</strong></td>
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<tr>
<td>Isolation Location</td>
<td>Available designated empty barn isolated away from all other exhibitor stalls</td>
<td>One empty barn at the end of the competitor barns</td>
</tr>
<tr>
<td>Exhibitor and Visitor Access</td>
<td>Limited Exhibitor and Visitor Access</td>
<td>No Ability to Restrict Exhibitor and Visitor Access</td>
</tr>
<tr>
<td>Vehicle Access</td>
<td>Restricted Vehicle Access with Monitoring at Entrance</td>
<td>Restricted Vehicle Access with No Monitoring of Entrance</td>
</tr>
<tr>
<td><strong>Feed and Water</strong></td>
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<tr>
<td>Feed storage</td>
<td>Covered hay and sealed containers for feed kept in a separate secure stall.</td>
<td>Secure storage stall with open feed bags and uncovered hay.</td>
</tr>
<tr>
<td>Water sources</td>
<td>Only Individual Water Source</td>
<td>Streams or Large Water Source</td>
</tr>
<tr>
<td>Separation of Feed and Manure Handling Equipment</td>
<td>Complete separation of feed and manure handling equipment.</td>
<td>Limited separation of feed and manure handling equipment</td>
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</table>

Equine Event Biosecurity Risk Assessment Pictorial

Horse Stabling Area

**HIGH RISK**
Disadvantages: Although the treated wood surface is easier to disinfect, the spacing between boards and the half door permit horse-to-horse contact. The horses stabled in an enclosed barn have a potentially increased respiratory disease risk due to challenges in air circulation.
Advantages: The smoother wood surface is easier to disinfect.

**MODERATE RISK**
Disadvantages: Non-treated wood surface and dirt flooring cannot be thoroughly cleaned and disinfected.

Protecting Equine Health
Step 3: Address High Risks: Implement Targeted Biosecurity

• Targets:
  – Horse Entry
  – Stabling
  – Isolation
  – Health Monitoring

• Exhibitor Education and Participation

• Simple Low Cost Approach

Protecting Equine Health
Horse Entry

- Entry health requirements
- Healthy horse inspections
- Animal identification
- Plan for sick horses on arrival

Protecting Equine Health
Stabling

• Ensure adequate number of stalls for event.

• Clean and Disinfect stabling

• Stable horses of similar disease risk and health status
  – I.e out of state horses should not be mixed with local horses.

• Limit human contact or provide hand sanitizers at the end of stable row.

• Ensure proper ventilation and air flow

Protecting Equine Health
Cleaning and Disinfection Tools

Cleaning and Disinfection of a Vacated Stall

1. Mucking out, cleaning and disinfecting a stall is ideally done within four (4) hours of the horse vacating the stall. If the vacated horse was sick, personnel should wear protective clothing, disposable boot covers and gloves while cleaning the stall.

2. Completely remove all feed, bedding and manure. Use a broom to sweep small-particle material into a pile and remove.

3. Gently rinse the inside of the stall door and the walls with low pressure water (no nozzle). Manually wash all visible loose organic matter down the walls. The use of high pressure water (i.e., pressure washer) is not recommended for cleaning stalls since it distributes dirt and infectious agents into the air and onto adjacent surfaces.

4. Use a foaming soap agent and a stiff-bristle brush to scrub the inside of the stall door and all four walls. The brush should be one that can fit into the corners of the stall.

5. Always scrub from the TOP DOWN in the following order:
   a. Scrub each wall, starting with the top left-hand corner of the back wall.
   b. Scrub an area 18 to 24 inches wide, using horizontal strokes from top of the wall to the bottom, then recircle the same area using vertical strokes.
   c. Move 18 to 24 inches to the right on the wall, and scrub another 18 to 24-inch wide area from top to bottom.
   d. Continue this process until you have scrubbed all four walls and the inside of the door.
   e. Use the same scrubbing pattern on cement floors.
   f. Use a designated brush to clean specific stall areas such as gate hinges, between pipes, waterers, hay rack, feed bucket, pipes, latches and ledges.
   g. Gently rinse off the foaming soap agent. Rebrush areas found with manure, blood or dirt “caked on” them with a flushing agent until clean, since organic matter interferes with the effectiveness of disinfectants. Remove any particulate matter left in the stall after scrubbing.

8. Finally, disinfect all stall surfaces:
   a. Spray the inside of the stall door, all four walls and any concrete floor with a disinfectant and use the same stiff-bristle brush and double-scrubbing pattern on all surfaces. Also spray the disinfectant solution on waterers, hayrack, feed buckets, pipes, latches, gate hinges and ledges.
   b. Gently rinse the inside of the door, the walls, the floor and all other stall surfaces and equipment with water.
   c. The disinfectant application/scrubbing process may be repeated three times.

9. After use, remove all particulate matter from stall cleaning equipment such as shovels, rakes, brooms and brushes, then soak the equipment in a barrel with disinfectant solution. Always disinfect stall cleaning equipment before cleaning another stall.

10. A designated event official should visually inspect cleaned/disinfected stalls to ensure that the stall is ready for a new occupant before assigning the stall to an owner/agent for another horse.

11. Once the stall has been cleaned, disinfected and inspected, the outer stall door should be kept locked until a new horse is assigned to the stall.

Cleaning and Disinfection of a Horse Trailer

1. Cleaning and disinfecting a horse trailer is ideally done within twenty-four (24) hours of shipping the horses. If the trailered horse was sick, personnel should wear protective clothing, footwear and gloves while cleaning the trailer.

2. Completely remove all feed, bedding and manure. Use a broom to sweep small-particle materials into a pile and remove for disposal.

3. Remove all detachable fittings, such as leads and halter. Wash these separately.

4. Remove floor mats to be cleaned and disinfected separately outside of the trailer.

5. Gently rinse the inside of the trailer with a solution of bleach, detergent and disinfectant. Allow the rinse to remain in the trailer for five minutes. Then gently rinse the inside of the door, the walls, the floor and all other stall surfaces and equipment with water.

6. Use a foaming soap agent and a stiff-bristle brush that can fit into the corners to scrub the inside of the trailer, all walls, the ceiling, the floor and the loading ramp.

7. Scrub from the TOP DOWN in the following order:
   a. Scrub each of the walls thoroughly with a brush.
   b. Scrub an 18 to 24-inch wide area from top to bottom.
   c. Move 18 to 24 inches to the right on the wall, and scrub another 18 to 24-inch wide area, slightly overlapping the previously scrubbed area.

8. Continue this process until you have scrubbed all surfaces, including the inside of the doors, the floor and ramps.

9. Use an appropriate size brush to clean specific trailer areas, such as gate hinges, between pipes, chest and tail tars, latches and ledges.

10. Gently rinse off the foaming soap agent. Surfaces with manure, blood or dirt “caked on” them should be scrubbed with foaming agent until clean, since organic matter interferes with the effectiveness of disinfectants.

11. Finally, disinfect all surfaces within the trailer:
   a. Spray all interior surfaces with a disinfectant solution and use a stiff-bristle brush and double-scrubbing pattern on all surfaces. Also spray the bleach solution on hayrack, pipes, latches, gate hinges and ledges.

12. In general, 1:10 dilution of bleach to water is effective. However, in most stall situations, organic material cannot be completely eliminated; therefore it is necessary to use a disinfectant that has activity in the presence of organic materials, such as phenolic (1 Stokke Enviromix® or Synthform®) or an accelerated hydrogen peroxide product (Virkon®). All disinfectants should be used according to manufacturer recommendations and label instructions.

13. Allow an appropriate contact time for the disinfectant. For a 1:10 bleach to water solution a minimum contact time is ten minutes. Then gently rinse the inside of the doors, all walls, the ceiling, the floor and the loading ramp.

14. Remove floor mats that should be cleaned and disinfected following the same procedure as the interior. Ensure wheels, mudguards and wheel arches are cleaned and disinfected.

15. Removed floor mats should be rinsed with water on both sides to remove dirt and debris.

16. Allow bleach to dry on the mat and once dry follow the same procedure to clean and disinfect the other side of the floor mat.

17. After trailer and mats have dried, return floor mats to trailer.

18. A visual inspection of the trailer should be done to ensure that the trailer is ready for a new occupant before shipping another horse.
TOP TIPS TO KEEPING YOUR HORSE HEALTHY AT HORSE SHOWS

1. Avoid direct horse-to-horse contact.

2. Monitor your horse for clinical signs of disease and report a temperature over 102°F to a veterinarian.

3. Avoid horse-to-human-horse contact.

4. Avoid sharing equipment unless thoroughly cleaned and disinfected between uses.

5. Avoid use of communal water sources.
Temperature Monitoring Log

Horse Name: ___________________________ Owner Name: ___________________________

Contact Person Name: ___________________________ Cell Phone Number: ____________

Instructions: Record the rectal body temperature of horse two times/day, every morning and evening.
A body temperature recording above 102°F is considered a fever that must be reported to a veterinarian
and/or event management. Record in Comments the presence (Y) or absence (N) of clinical signs of disease,
which includes, but is not limited to, the following: abnormal nasal discharge, coughing, diarrhea, ataxia or
wobbly gait, altered mentation (aggression or stupor), abnormal slobbering or off feed.

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Sick Horse at the Event

- Pre-planning is critical to success of disease control
- Evaluation of the situation
  - Sick horse and exposed horse assessment
- Isolation
  - WHERE: Ideally off site
  - WHEN? IMMEDIATELY
  - WHAT to isolate? Fever, neurologic horse, profuse diarrhea, etc
  - WHO to notify? Determine in advance who is responsible for isolation?

Protecting Equine Health
Guidance for Isolation Set Up

How to Set Up a Disease Isolation Unit at a Farm or Horse Show

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UC DAVIS VETERINARY MEDICINE
Center for Equine Health

Protecting Equine Health
Monitoring Movement and Isolation Areas

Protecting Equine Health
Exhibitor Education and Participation

• Advance notification
  – Outline horse health requirements
  – Outline exhibitor biosecurity expectations
  – Ideally part of premium booklets or show informational materials

• Onsite education
  – Signage: Biosecurity posters
  – Staff practicing good biosecurity

• Consequences for failure to comply

Protecting Equine Health
Benefits of a Biosecurity Plan at Equine Events

- Lessens threat of disease
- Addresses well being of horses
- Improves owner/trainer satisfaction
- Reduces “Risk of Liability”
- Provides for forward planning
- Promote business continuity for event and venue

Protecting Equine Health
Biosecurity Toolkit for Equine Events
http://www.cdfa.ca.gov/ahfss/animal_health/equine_biosecurity.html

BIOSECURITY TOOLKIT FOR EQUINE EVENTS

Welcome to the Biosecurity Toolkit for Equine Events.

The Equine Herpes Virus-1 outbreak, associated with the Western National Cutting Horse Event in Ogden, UT in May 2011, increased awareness and need for biosecurity measures at equine events. During the outbreak, the California Department of Food and Agriculture, Animal Health Branch (CDFA AHB), received numerous inquiries and requests for guidance for keeping horses healthy at equine events from the equine industry stakeholders in the state.

The California Equine Medication Monitoring Program (EMMP) Advisory Committee represents a broad range of equine disciplines regulated by the program and is responsible for addressing concerns of the equine industry. With more than 1600 shows a year that register with the program, the need for biosecurity outreach was evident. Based on limited available biosecurity

Protecting Equine Health
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- Dr. Josie Traub-Dargatz
- Dr. Ellen Mary Wilson
- EMMP Advisory Committee Members

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