Biosecurity

Overview

Biosecurity

● Series of management practices
  ● Bioexclusion
    – Preventing the introduction onto non-infected premises
  ● Biocontainment
    – Preventing the spread from an infected premises
    • By animals, personnel, equipment

ICS: Biosecurity Group

● Biosecurity Officer
  – Experienced veterinarian
  – Develops site-specific biosecurity plan
  – Train personnel on protocols
  – Ensure biosecurity implemented
● Biosecurity Team Members
  – Front line assistance
  – Biosecurity tasks to contain and control disease outbreak

Basic Biosecurity Elements

● Start biosecurity procedures quickly
● Awareness of biosecurity measures
● Understand disease transmission
● Biosecurity measures aimed at preventing disease spread by
  • Movement of animals
  • Movement of personnel
  • Movement of equipment

Disease Transmission

● Direct
  – Contact
  – Ingestion
  – Inhalation (aerosol)
● Indirect
  – Fomites
    • Inanimate objects
  – Vectors
    • Living organism (e.g., insects, rodents)

BIOSECURITY MEASURES

• Movement control and restriction
• Personal protective equipment
• Cleaning and disinfection
• Isolation
• Vector control
Movement Control: Animals
- Stop movements
- Movement restrictions
- Animals should not be moved if
  - Came from a confirmed or suspected premises
  - Had contact with infected or suspect animal
  - Are susceptible animal near infected or suspected premises
  - Found on transport vehicles that do not meet biosecurity standards

Movement Control: Personnel
- Restrict access
- Control movement on and off premises
- Post highly visible signage
  - Describing biosecurity protocols
  - Designating PBA and LOS work zones
- Log book for those allowed to access
- Post signs at premises boundary

Movement Control: Vehicles
- Potential fomite transfer
- Park in designated areas away from animal locations
- Clean and disinfect before entering and exiting premises

Personal Protective Equipment
- Two functions
  - Prevent further spread
  - Protect responders
- Don PPE prior to entry into area
  - Disposable Outerwear
    - Tyvek® coveralls, gloves, boot covers, masks
  - Reusable Outerwear
    - Cloth coveralls, rubber boots, goggles
- Wear clean and disinfected footwear and outerwear

Personnel Biosecurity
- Once on infected premises, do not exit until
  - PPE cleaned, disinfected
  - Disposable items left on premises or placed in designated area
  - Clean/disinfect reusable items on site
  - WASH HANDS!

Cleaning and Disinfection Procedure
- Cleaning
  - Remove all organic matter
    - Wash and rinse
- Disinfection
  - Use proper concentration
  - Allow proper contact time
  - Read safety precautions
  - Wear appropriate PPE
- All equipment or vehicles must be cleaned and disinfected
Isolation

- Infected or exposed animals should be housed in separate areas
- Proper carcass disposal of euthanized or dead animals

Wildlife Control

- Wildlife can carry diseases on and off the property
- Keep animals isolated from wildlife contact
- Ensure boundary measures are checked regularly and maintained
- Store food in a way that does not attract wildlife

Vector Control

- Source reduction
  - Prevent egg laying
  - Minimizing long vegetation (e.g., mowing)
- Control adults
  - Insecticides
    - Spraying, fogging, baiting
- Minimize animal interaction
  - Screens on buildings
  - Animal treatment

Biosecurity Lines

- Perimeter Buffer Area (PBA)
- Line of Separation (LOS)

BIOSECURITY LINES AND WORK ZONES

- Perimeter Buffer Area (PBA)
- Line of Separation (LOS)
- Biosecurity Work Zones

Perimeter Buffer Area (PBA)

- First Line of Defense
- Outer control boundary
  - Around premises or building perimeter
  - Designate PBA
    - Fencing, flags, ropes
  - Non-essential vehicles should not enter
  - Vehicles and equipment that are not cleaned and disinfected should not enter
  - Personnel training
**Line of Separation (LOS)**

- Building walls separating animals from outside, AND
- Clearly marked line at entry site of building
- Cleaning and disinfection protocols must be completed prior to movement across the LOS (entry and exit)

**Biosecurity Work Zones**

**Resources**

- USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Biosecurity
- Poultry Biosecurity Officer Information Manual
  - [http://www.poultrybiosecurity.org/](http://www.poultrybiosecurity.org/)
- Additional Just-In-Time Training

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