Carcass Disposal

Off-Site Locations (Rendering and Landfills) and Transportation Biosecurity

Off-Site Carcass Disposal

- Rendering Facility or Landfills
- Use depends on
  - Animal species
  - Quantity of carcasses
  - Pathogen of concern
    - Persistence
    - Ability to spread
  - Regulations
    - Local, state, federal

Rendering

- Heat conversion of animal carcasses into useable products
  - Meat and bone meal (protein-based solids)
  - Melted fat (tallow)
  - Water
- 200 rendering plants throughout US and Canada

Rendering Process

- Continuous rendering system
  - One vessel used for entire process
  - Processes are simultaneous
  - Little to no manual operation
- Moisture converted to steam
  - Temperature between 240-275°F
  - Destroys harmful pathogens

Rendering: Considerations

- Disposal of final product
  - Landfill
  - Burial
- Coordinate transport to facilities
- Surge capacity
- Biosecurity and wastewater procedures
- Process closely regulated
LANDFILLS

Landfills
- Public and privately owned
  - EPA’s I-WASTE tool
- Existing site
  - Liners
  - Leachate and gas collection systems
  - Minimal environmental risk
- Carcass degradation may take longer

Landfill: Regulations
- Highly regulated
  - Resources Conservation and Recovery Act (RCRA)
  - Title 40 Code of Federal Regulations
    Parts 239-299

Landfills: Considerations
- Immediately available
- Minimal environmental risk
- May have limited capacity
- Owner acceptance and terms of use
- Transportation
  - Biosecurity
  - Cost
- Public opposition

TRANSPORTATION

Carcass Transport: Planning
- Training & guidelines
  - Supervisors, operators, drivers
- Obtain transport vehicles
- Determine travel route
  - Direct as possible
- Supplies
  - Cleaning and disinfection
  - Personal protective equipment
- Permits & official documents
  - Federal, state & local
Transport Containers

- Liquid tight
  - Seal holes & cracks
  - Layers of duct tape & plastic

- Lining material
  - Polyethylene plastic
  - Sufficient material on all sides

- Absorbent material
  - Wood shavings

Loading the Containers

- Fill container
  - One foot from top
  - Maximum weight limit

- Spray with disinfectant

- Wrap and seal load

- Cover the container

- Check for leaks

- Clean and disinfect before leaving the site

Transport Process

- Use designated routes

- Avoid unplanned stops

- Have drivers take breaks on long distance trips

- Two-way communication at all times

Unloading

- Unloading procedures specified by facility

- Unload close to the disposal site

- Check for leaks and cover integrity

- Clean and disinfect after unloading
  - Interior, exterior, undercarriage
  - Tools and equipment
  - Dispose of PPE

Resources for Off-Site Disposal and Transport

- USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Disposal

- Carcass Disposal: A Comprehensive Review. USDA and Kansas State University
  - http://fss.kstate.edu/FeaturedContent/CarcassDisposal/CarcassDisposal.htm
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