Transporting Diseased Carcasses Workshop

April 9-10, 2013
Des Moines, Iowa
3D Logistical Infrastructure for Carcass Disposal Rendering and Landfill

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with credits to
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On-site Burial Is NOT A Realistic Early Response
Select Animal Carcass Disposal Issues in Florida

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Emergency Programs
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Florida Department of Agriculture & Consumer Services
Bottom Line!!

• In Florida we will probably have to transport animal carcasses for disposal
NC Disposal/Transport Project

Classification, Conveyances, Disposal resource facilities, and Permitting Swine and Dairy Industry Focus
Overarching Goal

Utilize efforts from this workshop group to explore the possibility of developing transportation protocols (or the guidance for) to dispose of infected carcasses at rendering plants and landfills, should the need arise during an outbreak.
Standardized Protocol

We want to develop a standard protocol that could potentially be used as a national guideline, and possibly *(adopted)* utilized by individual states to develop regional or state protocols.
Topics to Consider

Transportation Issues

- Biosecurity
- Permitting
  - Non-infected Animals
  - Infected Carcasses
- Routing
  - Conveyance Type
- C&D (clean/disinfect)
  - Conveyances
  - Disposal Facilities
  - Workers
Topics to Share

Disposal resources

- Rendering Facilities
  - Facility Type (species)
  - Capacities
  - C&D
  - Business Continuity

- Landfills
  - Capacities
  - Location
  - C&D
  - Business Continuity
Containers

- **Transport specifications**
  - Containers:
    - Leak-proof containers
    - Air-tight container with filtered vent

- **What conveyances are available?**
  - Capacity
  - Mobility/Suitability to task
  - Labeling
  - Operations “friendly”

- **6.2: Leak proof, air tight, and protected**
Examples of conveyances/containers

21.5 cubic yard container

Vent
Examples of conveyances/containers

20, 30, or 40 cubic yard type container
Feedlot population - 100,000 head at 1000 lbs each = 100M lbs = 50,000 tons

Largest commonly-available transport container is 40-ft (30-ton)…

It would take about 1700 container loads to move animals from one feedlot to disposal site
Permitting

✓ Permitting?
  ▪ Allowance/permission
    • Process to allow movement
  ▪ Compliance
    • Process to enforce proper movement

▪ Use something already in existence?
  • Examples:
    ➢ USDA 1-27
    ➢ MSP Live movement documents
    ➢ Hazmat permit guides- ex. documentation for 6.2
**USDA 1-27**

- Permit
  - Seals
  - Signatures

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**Decon/biosecurity measures**

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**WARNING TO OWNER, SHIPPER AND TRUCKER - LIVESTOCK MUST BE DELIVERED TO CONSIGNEE WITHOUT DIVERSION**

I understand that it is a violation of Federal law to move the animals identified herein interstate except in accordance with the provisions of applicable Federal regulations. I also understand that such animals must comply with existing state laws and regulations governing movement of livestock and poultry. I have arranged or will arrange for a copy of this permit to accompany the interstate shipment and be delivered with the above described animals.

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**Signature of Owner or Shipper**

- **Title**: Owner or Shipper
- **Date Signed**

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**Place Animals Received**

- **Date Animals Arrived**
- **No. Animals Received**
- **Date Slaughtered/Quarantined**

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**Date and Time Seals Broke**

- **Authorized Signature**
- **Date Cleaner & Disinfector Required**
- **Signature of Inspector**
- **Date Signed**
Best Practices to Reduce Risks

- Biosecurity
  - Exit positive/exposed premise
  - at Rendering Facilities
  - at Landfills
  - During transport

- Discuss the applicability of guidelines being used for Secure Milk Supply (farm and plant) and those outlined in **FADPreP** for exit from infected premises.
Best Practices to Reduce Risks

Routing-

Factors

• Load/size restrictions on roads/bridges
• Exposure to other farms
• Traffic patterns
• Locations of disposal options (renderer/landfill)

• Limitations: Have to consider that some farms may not lend themselves to transporting animals off farm due to impracticality imposed by restrictions of bridges/roads to accommodate large scale movements
Decision Tree – Transporting Diseased Cargo

- **Infected Animals Confirmed**
  - **Disposal Method**
    - **Bury or Incinerate on site?**
      - **Yes**
        - Proceed with on site disposal
      - **No**
        - **Transport to Disposal Site**
          - **Has vehicle been C&D’d?**
            - **Yes**
              - **Manifest/Bill of Lading on hand?**
                - **Yes**
                  - Vehicle proceeds to disposal site
                - **No**
                  - **Obtain appropriate Permits**
            - **No**
              - **Permits Obtained?**
                - **Yes**
                  - Vehicle returns to load up site or to normal operations
                - **No**
                  - **Vehicle moves to Decon Station***
                    - **Manifest/Bill of Lading Received**
                      - **Yes**
                        - Vehicle proceeds to disposal site
                      - **No**
                        - **Obtain appropriate Permits**

  - **No**
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Decision Tree – Transporting Diseased Cargo, with Accident en Route

1. **Accident en Route?**
   - Yes → **Driver Injured?**
     - Yes → **Provide Care for driver (e.g. 911)**
     - No → **Assess Situation & Notify ICT**
   - No → **Cargo Spillage?**
     - Yes → **ICT Rep arrives on scene**
     - No → **Vehicle physically able to proceed?**
       - Yes → **Complete accident report and proceed**
       - No → **Controls Area w/LE & ICT**

2. **ICT coordinates vehicle replacement**

3. **Decon Team arrives and Decons vehicle and site**

4. **Vehicle cleared to proceed after Decon**

5. **Proceed to disposal site**

**Decision Point**
Use of Rendering & Landfills

✓ What resources are available?

✓ What are the limitations of both?
  ▪ Capacities:
    • Limited based on species type? (rendering)
    • Should agreements be developed?
    • Buy in from industry?

✓ C&D?  
  ▪ In a word: Challenging!

✓ Biosecurity!!!??!!!
## Disposal Calculator

### Disposal Capacity Calculator

**February, 2013**

<table>
<thead>
<tr>
<th>Species and Total Count</th>
<th>Average Weight (lbs)</th>
<th>Percent to be Culled</th>
<th>Disposal Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swine</td>
<td>160</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>9,200,000</td>
<td></td>
<td></td>
<td>147,200,000</td>
</tr>
</tbody>
</table>

Enter animal population count in gray box

### Landfill Options (Operating Units: Tons)

<table>
<thead>
<tr>
<th># Landfills</th>
<th>Current Capacity (all landfills) Per Day</th>
<th>Average Capacity (per landfill) Per Day</th>
<th>Number of Days for disposal: Current Capacity</th>
<th>1/4 Rule Capacity Per Day Using all selected landfills</th>
<th>Number of Days for disposal: 1/4 Rule</th>
<th>Additional capacity* required per day - beyond 1/4 Rule Capacity**</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>20,500</td>
<td>513</td>
<td>3.6</td>
<td>5125</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

*Additional capacity required to dispose of material within 30 days.
**1/4 Rule Capacity equals capacity of number of landfills selected multiplied by .25

### Rendering Options (Operating Units: Pounds)

<table>
<thead>
<tr>
<th># Rendering Facilities</th>
<th>Current Capacity Per Week</th>
<th>Average Capacity Per Week</th>
<th>Number of Weeks for disposal: Current Capacity</th>
<th>Number of Rendering Facilities required to dispose of material in 4 weeks (using average capacity)</th>
<th>Additional capacity*** required per week - beyond current capacity****</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>63,950,000</td>
<td>10,658,333</td>
<td>2.3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

***To dispose of material within 4 weeks. ****Current Capacity equals number of rendering facilities selected

### Conveyance Options - # Truck Loads

<table>
<thead>
<tr>
<th>Conveyance Type</th>
<th>Capacity (cubic yards)</th>
<th>approximate weight per cubic yard of material</th>
<th># Truck Loads required to dispose of material</th>
<th># Trucks/Conveyances Available</th>
<th>Total # of Trips (per truck)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30’ Dump Trailer</td>
<td>50</td>
<td>2500</td>
<td>1,178</td>
<td>50</td>
<td>24</td>
</tr>
</tbody>
</table>

Legend:
- No additional capacity required
- Additional capacity required
- Options available for selection