# Carcass Disposal:

## On-Site Burial

During an animal health emergency, the timely and safe disposal of animal carcasses and related materials will be necessary to prevent the spread of disease. Burial is a common method used for this purpose.

### Burial

- Carcasses placed in an excavated trench or pit
- Covered with soil or backfill
- Buried materials are degraded and broken down into minerals and organic material.
- Decomposition generates heat that destroys microorganisms.
  - Decomposition time varies
  - Dependent on the species, size, number of carcasses, as well as soil composition, temperature and moisture.
  - The process can take weeks to years.

### Burial Types

- Trench burial
  - Daily mortalities
  - Trapezoid or vertical pits
  - Inexpensive
  - Convenient
- Mass burial
  - Large numbers of animal mortalities
  - Trapezoid pits with liners
  - More expensive and time consuming

### Site Selection

- Soil properties
  - Texture and permeability
- Construction of the site
  - Slope of land
  - Depth of water table and bedrock
- Location of the site
  - Proximity to water sources or public areas
  - Accessibility
- Projected future use of the site

### Construction and Design

- Site size/area
  - Depends on species, age/size, quantity
- Trapezoid shape pits
  - 42 cubic feet per:
    - 1 adult bovine OR
    - 5 pigs/sheep OR
    - 40 chickens
- Liners to minimize seepage
- Caution during excavation
- Trench size
  - 4-8 feet deep
  - 6 feet wide
  - Two large carcasses side by side
- May include liners
  - Clay may be used as a base layer
- Vent large carcasses
- Settlement during decomposition
  - May need additional backfil

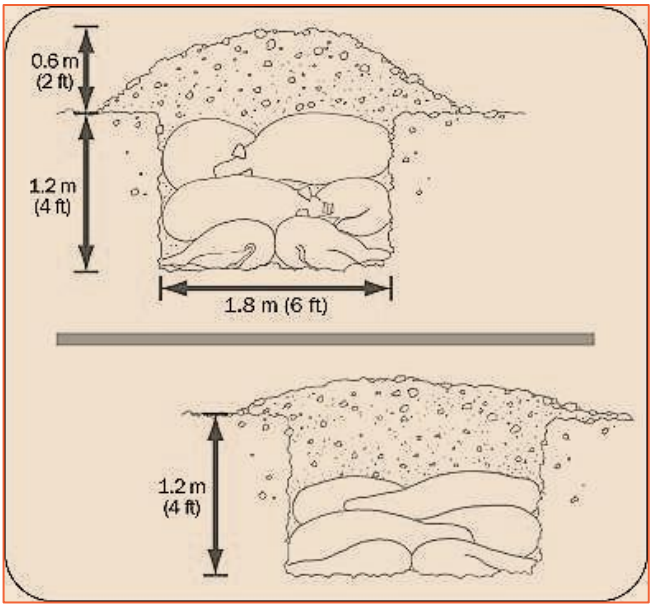


Photo Source: Ontario Ministry of Agriculture and Food at http://www.omafra.gov.on.ca/english/engineer/facts/09-029.htm

## Considerations

- Decomposition gases
  - Bloating can displace burial mound
  - Lance/vent carcasses prior to burial
  - Use caution if zoonotic disease
- Burial location
  - Soil characteristics (slope, permeability)
  - Area of land required
  - Accessibility
  - Subsequent intended use of site
  - Record Global Position System (GPS)
- Environmental impacts
  - Ground and surface water sources (leachate)
  - Air quality (odor)
  - Gases (methane, carbon dioxide, hydrogen sulfide)
  - Difficult in cold weather conditions
- Biosecurity
    - Personal protective equipment (PPE)
    - Movement control
    - Cleaning and disinfection
- Movement control
  - All vehicles/equipment used must be cleaned and disinfected
- Site security
  - Limit unauthorized access
    - Vandals
    - Scavengers
    - Curious public
  - Log book
  - Warning or restriction signs
  - Site security personnel
- Regulations
  - Not allowed in some states
  - Consult State regulations
    - Sites highly regulated
    - Depth, width, length, max size
- Public perception

## Personnel Safety

- Safety Issues
  - Physical demands
    - Long hours
    - Response activities
  - Psychological impact
- Weather conditions

## Additional Resources

USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Disposal
http://www.aphis.usda.gov/animal_health/emergency_management/downloads/nahems_guidelines/disposal_nahems.pdf

Carcass Disposal: A Comprehensive Review. National Agricultural Biosecurity Center Consortium. http://fss.k-state.edu/FeaturedContent/CarcassDisposal/CarcassDisposal.htm

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