

Land area or excavation volume required for trench burial.

Jurisdiction/ Source	Total Trench Depth (D)	Carcass Depth	Depth Cover	Trench Width (W)	Trench Length (L)	Est. Area or Volume Required	Carcass Equivalents	Other Notes
Literature								
NC (Wineland & Carter, 1997)						50-55 ft ³ (~2.0 yd ³) per 1,000 broilers or commercial layers 100 ft ³ (3.7 yd ³) per 1,000 turkeys		Note that the volume estimates were based on a disposal pit design, rather than trench burial.
Australia (Atkins & Brightling, 1985)	~3.5 m (11.5 ft)	1.5 m (5 ft)	2.0 m (6.5 ft) to ground level	3-5 m (10-16.5 ft) determined by equipment used	--	1 m ³ (~35 ft ³ or 1.3 yd ³) per 8-10 mature sheep (off-shears)	--	To calculate the necessary pit volume, including an allowance for cover, a value of 0.3 m ³ of excavation per sheep was used.
Australia (Lund, Kruger, & Weldon)	2.6 m (8.5 ft)	--	1 m (3.3 ft)	4 m (13 ft)	6.7 km (~4.2 mi) for 30,000 cattle	30,000 head of cattle requires trench of 70,000 m ³ (2.5 million ft ³ , or 92,000 yd ³)	--	Equates to excavation volume of 2.3 m ³ (82 ft ³ or 3 yd ³) per cattle carcass.
N/A (McDaniel, 1991)	9 ft	3 ft	6 ft	7 ft	--	14 ft ² at bottom of pit for each adult bovine	1 adult bovine = 5 mature sheep or hogs	For every additional 3 ft of trench depth, the number of carcasses per 14 ft ² can be doubled. Due to bulky feathers, poultry

							(assuming 3 ft depth, equates to ~42 ft ³ or ~1.2 yd ³ per adult bovine)		require more burial space per unit of weight than cattle, hogs, or sheep. Estimate space required for poultry by counting carcasses that fill a space of known volume (i.e. truck).
N/A (Sander, Warbington, & Myers, 2002)	9 ft	--	3-4 ft	7 ft	--	--	14 ft ² per mature cow	--	
N/A (Anonymous, 1973)	--	--	--	--	--	--	Assume 40 lbs of poultry carcasses per 1 ft ³	--	Equates to approximately 1,080 lbs/yd ³ .
Regulatory Agencies									
AL (USDA, Natural Resource Conservation Service, Alabama)	8 ft (for deep soils where bedrock not a concern)	1 ft max small animals 1 carcass max large animals	2 ft mounded	--	--	--	--	--	Max size of burial excavation should be 0.1 acre (~4,400 ft ²) Excavations over 3.5 ft deep should be sloped on sides at least 1.5 (horiz) to 1 (vert)
TX (USDA, Natural Resources Conservation Service, Texas, 2002)	3 ft min 8 ft max	1 ft small animals 1 carcass large animals	2 ft	4 ft	Adequate for mortality	Total mortality weight ÷ 62.4 lb/ft ³ = ~volume of mortality in ft ³ Pit excavation = 2-4 times the mortality volume to	--	--	Pits 6 ft or greater in depth – perform soil tests to a depth two ft below lowest planned excavation Multiple pits – separate by 3 ft of undisturbed or compacted soil For deep soils, carcasses and soil can be placed in multiple layers up to a total

						allow for voids and fill soil Spreadsheet avail on request		depth of 8 ft 62.4 lb/ft ³ suggests a density of approximately 1,680 lbs/yd ³
APHIS (USDA, 1980)	9 ft or Greater	--	--	7 ft or greater	--	14 ft ² at bottom of pit for each adult bovine	1 adult bovine = 5 mature sheep or hogs	For every additional 3 ft of trench depth, the number of carcasses per 14 ft ² can be doubled. Trench site should be mounded over and neatly graded. Do not pack the trench – decomposition and gas formation will crack a tightly packed trench causing it to bubble and leak fluids.
APHIS (USDA, 2001a)	--	--	--	--	--	42 ft ³ (~1.2 yd ³) required to bury 1 bovine, 5 pigs, or 5 sheep	--	
Australia (Agriculture and Resource Management Council of Australia and New Zealand, 1996)	~5 m (~16.5 ft)	--	2 m (6.5 ft)	~3 m (~10 ft)	--	1.5 m ³ (~53 ft ³ or ~2 yd ³) per each adult beast or 5 adult sheep	--	Example: Trench 5 m deep x 3 m wide filled with carcasses to within 2.5 m of ground level will accommodate 5 cattle or 25 sheep per linear meter (2.5 x 3 x 1 = 7.5 m ³ ; 7.5/1.5 = 5 cattle or 25 sheep)
Alberta, Canada	4-5 m (13-16.5)	--	2 m (6.5 ft)	2 m (6.5 ft)	10 m (33 ft)	31 adult cattle carcasses	1 bovine = 5 adult hogs or	

(Ollis, 2002) ft)

require
trench 4 x 2 x
10 m
(DxWxL)
(80m³, 2,800
ft³, or 105 yd³
per 31
adult cattle)
(~2.6 m³,
92 ft³, or 3.5
yd³ per
carcass)
46 adult cattle
carcasses
require
trench 5 x 2 x
10 m
(DxWxL)

sheep
1 bovine = 40
broiler
chickens
(market-ready
weight)
