U.S. DEPARTMENT OF AGRICULTURE Natural Resources Conservation Service	**ANIMAL MORTALITY COMPOSTING FACILITY (316)**	WVENGWS316 09/09

Land Operator _____Date _____

Service Center _____County _____ Program _____

Prepared By _____,_____ Checked By _____,_____ Approved By _____,_____

Basic Data: Resource Problem_____

Conservation Practices & Job Approval_____

Design Information: Location Sketch existing structures (poultry houses, barns, wells, adjacent landowners, sinks, water bodies, streams, etc.), prevailing wind direction, bar scale, north arrow, plan location of practice (structure, pipeline, roof runoff, diversion, etc.), topographic information, soils map, utility check sheet (WV-Eng-46),

Location Information

_____Distance to Closest Dwelling _____ Distance to Well ____ Distance to Surface Water
_____Distance to sink hole _____ Out of 100 yr. flood plain ____ Distance to Property Line

Operation Information

Bird Type _____ Flock Days ____; Flocks/yr____.; _____- House Dimensions ____ft. x ____ft.; ____ Clean out depth" , _____ Cleanout per Year; _____ " Single Large Cleanout Depth/Yr.

Bird Type _____ Flock Days ____; Flocks/yr____.; _____ - House Dimensions ____ft. x ____ft.; ____ Clean out depth" , _____ Cleanout per Year; _____ " Single Large Cleanout Depth

Animal Type _____ #____; #/Yr.____; . Animal Type _____ #____; #/Yr.____;

Mortality Volume

Mortality Volume = Mortality Weight (#) x Volume Factor = MV (CF)						
Number Start N1 (No.)	**Number Harvested N2 (No.)**	**Mortality % $\frac{(N1-N2) \times 100}{N1}$ M (%)**	**Market Weight W (lbs.)**	**Days to reach market weight T(days)**	**Volume Factor (Table 1) VF**	**Mortality Bin Volume (Primary and Secondary) $\frac{N1 \times (M\%) \times W \times VF}{T \times 100}$**

Mortality Composter Design (Dimensions and Volume)

Bin size may vary based on equipment needs. Primary Bin (Bp) - height 4 - 5 ft.; length (front to back) 6 -10 ft; width 8-10 ft. (width=front end loader + 2.0 feet); Secondary Bin (Bs) typically same as the primary bin or can be one large bin 8-10'wide x 4-5'deep x length of all primary bins (material dumped over wall to adjacent bin area).								
Identify	**Mortality Bin Volume (MBM) CF**	**Bin Height (H) FT**	**Bin Length (L) FT**	**Bin Width (W) FT**	**Compost Depth (CD) FT**	**Primary Bin (PBV) Volume HxLxCD CF**	**Min. No. of Bins (round up) MBV/PBV**	**Secondary Bin (Sb) Volume CF**

Mortality Composter Design Basics:

_____ Number of Primary Bins; ___ width (ft); ____ length (ft); ____ height (ft)

Note: the bin height must be greater or equal to the compost depth

_____ Number of Secondary Bins; ____width (ft); ____length (ft); ____ height (ft)

Note: Consider if one large bin, width for equipment access.

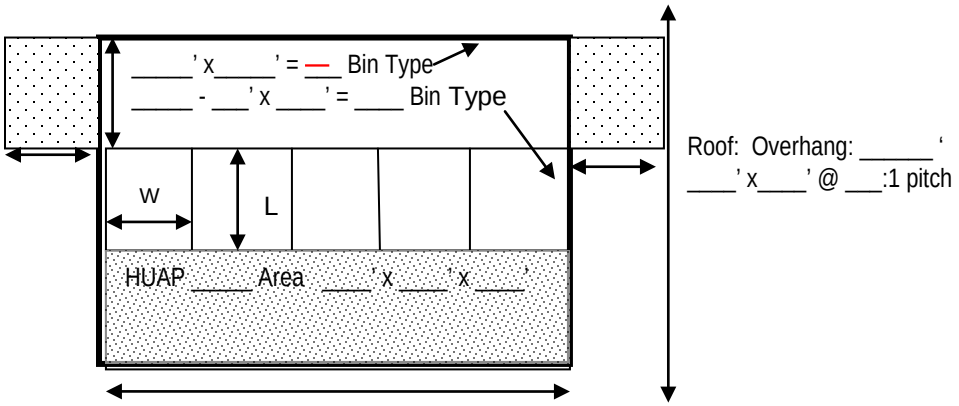
Roofed Structure Dimensions;

18 Length (ft); ____ Width (ft); ____ Eve Height (ft); ___ Overhang (ft), ____ Post Spacing (ft)

Heavy Use Area Protection:

___ - _____ Length (ft); ____ Width (ft); 8 gravel thickness (in); _____ gravel type

_____ Length (ft); ____ Width (ft); ____ gravel thickness (in); _____ gravel type



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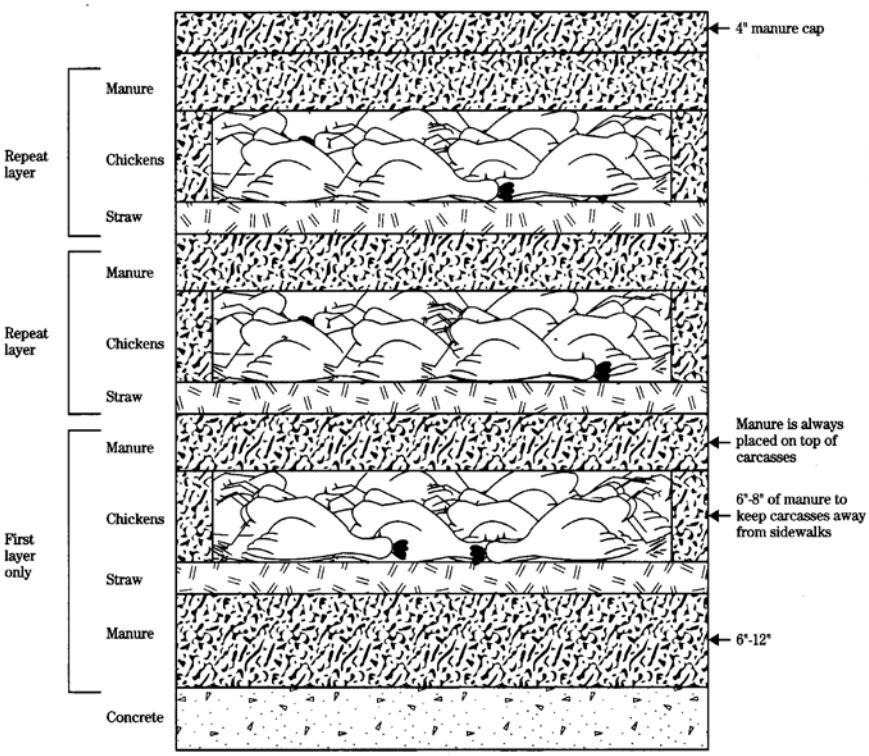
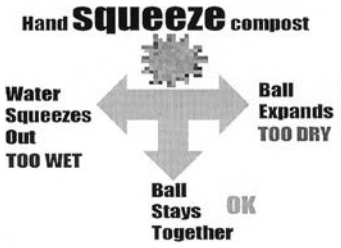
Roofed or Covered Dead Bird Composter Recipe





Broiler Compost Mix		
Ingredient	Vol. (part)	Wt. (part)
Straw	1.0	0.1
Broiler	2.0	1.0
Litter/Manure	2.0	1.5
Water*	0.5	0.75
Adjust water as needed.		

- Temperature is the key indicator for determining if composter is working correctly.
- It may take 5-7 days for primary mortality to reach compost temperatures of 130 degrees Fahrenheit, more time will be required the large or heavier the mortality weight.
- Temperature should peak for 5 -7 days at 130-140 degrees Fahrenheit for pathogen kill. Expect the same time and temperature for the secondary composting process.
- If the composted material is too wet (greater than 60% and water will squeezed out) or too dry (less than 45% and does not form a ball) adjust recipe, you may need to add seed material.
- If it does not reach these temperatures then the C: N ratio or the amount of moisture is wrong. If temperature rises **above 160 degrees, it is too high, remove immediately to cool down. Start over** and add moisture as needed.
- Compost managed at the required temperature will favor pathogen and weed seed destruction.

Table 1- Volume Factor for mortality when Nitrogen Source is Poultry Litter or Manure (AWMFH Table 10-9)						
Carcass Size (lb.)	0-4	4 - 10	10 - 25	25 - 300	300 - 750	750 - 1400
Bin Volume Factor	1.0 – 2.5	3.0	5.0	10.0	14.0	20.0

Table 2 – Animal Mortality Rates AWMFH Table 10-10				
Animal or Poultry Type	**Mortality Rate %**	**Growth Cycle (Day)**	**Cycles per year**	**Market Weight #**
Poultry				
Broiler	4.5-5.0	42-49	5.5-6.0	42
Roaster (F/M)	3/8	42/70	4/0.9	7.5/4.5
Laying Hen	14	440	0.9	4.5
Breeding Hen	10-12	440	.9	7-8
Breeder Male	20-25	300	1.1	10-12
Turkey (F/M)	5-9/9	95/112	3/3	14/24
Swine				
Farrow-pre wean	11	20		10
Farrow-nursery to 60#	2.6	47		35
Swine, grow/finish	6	119	2.5	210
Cattle				
Beef >500#	1.2			
Beef Calf	3.3			
Dairy >500#	2.8			
Dairy calf	6.4			
Horse				
< 20 years	1.2			
> 20 years	10.2			
Foal or pony <500#	4.9			
Sheep				
All	6.2			
Sheep-Non-predator	3.9			
Lamb, all causes	10.1			
Lamb, Non-predator	5.5			