

**Table 4-3** Unit weights of common bedding materials

Material	Loose	Chopped	lb/ft <sup>3</sup>	
Legume hay	4.25	6.5		
Nonlegume hay	4.00	6.0		
Straw	2.50	7.0		
Wood shavings	9.00			
Sawdust	12.00			
Soil	75.00			
Sand	105.00			
Ground limestone	95.00			

**Table 4-4** Daily bedding requirements for dairy cattle

Material	Barn type		
	Stanchion stall	Free-stall	Loose housing
	lb/d/1000#		
Loose hay or straw	5.4		9.3
Chopped hay or straw	5.7	2.7	11.0
Shavings or sawdust		3.1	
Sand, soil, or limestone		1.5	

(210-AWMFH, 4/92)

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**Table 4-7** Dairy waste characterization — lagoon

Component	Units	Lagoon		
		Anaerobic Supernatant	Sludge	Aerobic Supernatant
Moisture	%	99.75	90.00	99.95
TS	% w.b.	0.25	10.00	0.05
VS	lb/1000 gal	9.16	383.18	1.67
FS	"	11.66	449.82	2.50
COD	"	12.50	433.16	1.25
BOD <sub>5</sub>	"	2.92		0.29
N	"	1.67	20.83	0.17
NH <sub>4</sub> -N	"	1.00	4.17	0.10
P	"	0.48	9.16	0.08
K	"	4.17	12.50	
C:N ratio		3	10	

\* Milk house and milking parlor wastes only.

**Table 4-5** Dairy waste characterization — as excreted\*

Component	Units	Cow		Heifer
		Lactating	Dry	
Weight	lb/d/1000#	80.00	82.00	85.00
Volume	ft <sup>3</sup> /d/1000#	1.30	1.30	1.30
Moisture	%	87.50	88.40	89.30
TS	% w.b.	12.50	11.60	10.70
	lb/d/1000#	10.00	9.50	9.14
VS	"	8.50	8.10	7.77
FS	"	1.50	1.40	1.37
COD	"	8.90	8.50	8.30
BOD <sub>5</sub>	"	1.60	1.20	1.30
N	"	0.45	0.36	0.31
P	"	0.07	0.05	0.04
K	"	0.26	0.23	0.24
TDS		0.85		
C:N ratio		10	13	14

\* Increase solids and nutrients by 4% for each 1% feed waste more than 5%.