

(e) Swine

Swine waste and waste management systems have been widely studied, and much has been reported on swine manure properties. Table 4–10 lists characteristics of as

excreted swine manure from feeding and breeding stock. Breeding stock manure characteristics, also shown in table 4–10, are subject to less variation than those for growing animals.

Table 4–10 Swine waste characterization—as excreted**(a) Mature swine in units per day-animal ^{1/}**

Components	Units	Sow		Boar 440 lb
		Gestating 440 lb	Lactating 423 lb	
Weight	lb/d-a	11	25	8.4
Volume	ft ³ /d-a	0.18	0.41	0.13
Moisture	% w.b.	90	90	90
TS	lb/d-a	1.1	2.5	0.84
VS	lb/d-a	1.0	2.3	0.75
BOD	lb/d-a	0.37	0.84	0.29
N	lb/d-a	0.071	0.19	0.061
P	lb/d-a	0.020	0.055	0.021
K	lb/d-a	0.048	0.12	0.039

^{1/} Table 1.b, ASAE D384.2, March 2005

(b) Immature swine in units of per finished animal

Components	Units	Nursery pig	Grow to finish
		27.5 lb	154 lb
Weight	lb/f.a	87	1200
Volume	ft ³ /f.a.	1.4	20
Moisture	% w.b.	90	90
TS	lb/f.a.	10	120
VS	lb/f.a.	8.7	99
BOD	lb/f.a.	3.4	38
N	lb/f.a.	0.91	10
P	lb/f.a.	0.15	1.7
K	lb/f.a.	0.35	4.4

(c) Mature swine in units per day per 1,000 lb animal unit

Components	Units	Sow		Boar ^{3/}
		Gestating ^{1/}	Lactating ^{2/}	
Weight	lb/d-1000 AU	25	59	19
Volume	lb/d-1000 AU	0.41	0.97	0.30
Moisture	% w.b.	90	90	90
TS	lb/d-1000 AU	2.5	5.9	1.9
VS	lb/d-1000 AU	2.3	5.4	1.7
BOD	lb/d-1000 AU	0.84	2.0	0.66
N	lb/d-1000 AU	0.16	0.45	0.14
P	lb/d-1000 AU	0.05	0.13	0.05
K	lb/d-1000 AU	0.11	0.28	0.09

^{1/} Table 4–10(a) value × (1000 lb/440 lb avg. wt.)

^{2/} Table 4–10(a) value × (1000 lb/423 lb avg. wt.)

^{3/} Table 4–10(a) value × (1000 lb/440 lb avg. wt.)

(d) Immature swine in units of per day per 1,000 lb animal unit

Components	Units	Nursery ^{1/}	Grow to finish ^{2/}
		1000 lb AU	1000 lb AU
Weight	lb/d/1000 lb AU	88	65
Volume	ft ³ /d/1000 lb AU	1.4	1.1
Moisture	% w.b.	90	90
TS	lb/d/1000 lb AU	10	6.5
VS	lb/d/1000 lb AU	8.8	5.4
BOD	lb/d/1000 lb AU	3.4	2.1
N	lb/d/1000 lb AU	0.92	0.54
P	lb/d/1000 lb AU	0.15	0.09
K	lb/d/1000 lb AU	0.35	0.24

^{1/} Table 4–10(c) value × (1000 lb/27.5 lb avg. wt.)/36 days fed

^{2/} Table 4–10(c) value × (1000 lb/154 lb avg. wt.)/120 days fed