

Emissions of Greenhouse Gases in the United States 2004

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Table 27. U.S. Nitrous Oxide Emissions from Solid Waste of Domesticated Animals, 1990 and 1996-2004

Source	1990	1996	1997	1998	1999	2000	2001	2002	2003	P2004
Million Metric Tons Carbon Dioxide Equivalent										
Cattle	57.5	60.6	59.2	58.3	57.9	57.4	56.9	56.7	56.3	55.8
Swine	1.5	1.5	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.7
Poultry	0.9	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4
Horses	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Sheep	1.0	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5
Goats	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	61.9	65.1	63.8	62.9	62.4	61.8	61.4	61.2	60.7	60.3
Thousand Metric Tons Nitrous Oxide										
Cattle	194	205	200	197	195	194	192	192	190	189
Swine	5	5	6	6	6	5	6	6	6	6
Poultry	3	4	4	4	4	4	4	4	4	5
Horses	2	2	2	2	2	2	2	2	2	2
Sheep	3	3	2	2	2	2	2	2	2	2
Goats	1	1	1	1	1	1	1	1	1	1
Total	209	220	216	212	211	209	208	207	205	204

P = preliminary data.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Estimates presented in this chapter. Nitrogen content of waste by species, manure management systems, and emissions coefficients from Intergovernmental Panel on Climate Change, *Greenhouse Gas Inventory Reference Manual: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, Vol. 3 (Paris, France, 1997), pp. 4.89-4.107, web site www.ipcc.ch/pub/guide.htm. Population data for horses and goats extrapolated from U.S. Department of Commerce, Bureau of the Census, *Census of Agriculture* (1982, 1987, 1992, and 1997). All other animal populations from U.S. Department of Agriculture, National Agricultural Statistics Service, web sites www.usda.gov/nass/pubs/histdata.htm and www.nass.usda.gov/ipedb/. Typical animal sizes from U.S. Environmental Protection Agency, Office of Air and Radiation, *Anthropogenic Methane Emissions in the United States: Estimates for 1990* (Washington, DC, April 1993), p. 6-8. Cattle sizes adjusted by annual slaughter weight from U.S. Department of Agriculture, National Agricultural Statistics Service.